

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended): A symbol timing recovery circuit, utilized in a phase demodulator, generating phase differences at the same sampling points of neighboring symbols to determine an optimal sampling point in a symbol period, comprising:

a phase difference generating circuit for first mapping the phase difference to a first quadrant of a phase plane, subtracting the mapped difference by a default phase value to obtain a result and taking a square of the result;

a selection circuit connected to the phase difference generating circuit for outputting the square of the result for every sampling point of a symbol ~~result of a phase difference of every sampling point of a symbol~~ to its corresponding output end;

an accumulation module including accumulators whose number is equal to the number of the sampling points in a symbol, said accumulators receiving the outputs of the selection circuit for accumulating the squared results ~~phase differences~~ of the same sampling points of continuous neighboring symbols; and

a comparison module for comparing the sums of the squared results ~~phase differences~~ outputted from the accumulators; the optimal sampling point corresponding to an accumulator having the smallest sum of the squared results ~~phase differences~~.

Claim 2. (original): The symbol timing recovery circuit of Claim 1, wherein the default phase value is $\pi/4$.

Claim 3. (original): The symbol timing recovery circuit of Claim 1, wherein said selection circuit is a demultiplexer.

Claim 4 (original): The symbol timing recovery circuit of Claim 1, wherein each of the symbols has 25 sampling points which means that a sampling rate is 25 times of a symbol rate.

Claim 5 (currently amended): A symbol timing recovery circuit, utilized in a phase demodulator to generate phase differences at the same sampling points of neighboring symbols to determine an optimal sampling point in a symbol period, comprising:

a phase difference generating circuit for mapping the phase difference to a first quadrant of a phase plane, subtracting the mapped difference by a default phase value to obtain a result and taking a square of the result;

an operation circuit for summing up the squared results ~~of phase differences~~ of the same sampling points of neighboring symbols;

a delay circuit module including a plurality of delay circuits whose number is equal to the number of sampling points in a symbol; wherein the delay circuits are connected in series, and the output of the last delay circuit cooperates with the operation circuit to generate an input to a first delay circuit; and

a comparison module for comparing the sums of the squared results ~~phase differences~~ outputted from the delay circuit module to determine an optimal sampling point corresponding to a delay circuit generating the smallest sum of the squared results ~~phase differences~~.

Claim 6 (original): The symbol timing recovery circuit of Claim 5, wherein the default phase value is $\pi/4$.

Claim 7 (original): The symbol timing recovery circuit of Claim 5, wherein said operation circuit is an adder.

Claim 8 (original): The symbol timing recovery circuit of Claim 5, wherein the symbol has 25 sampling points which means that a sampling rate is 25 times of a symbol rate.

Claim 9 (currently amended): A symbol timing recovery method, utilized in a phase demodulator to generate phase differences at the same sampling points of neighboring symbols to determine an optimal sampling point in a symbol period, comprising the following steps:

mapping a phase difference to a first quadrant of a phase plane;

subtracting the phase difference mapped to the first quadrant by a default phase value to obtain a result, and taking a square of the result;

computing the square of the result ~~phase differences~~ of every sampling point in a symbol, and accumulating the square of the results ~~phase differences~~ at the same sampling points of the continuous neighboring symbols; and

determining a sampling point having the smallest sum of the squared results ~~phase differences~~, thereby obtaining an optimal sampling point.

Claim 10 (original): The symbol timing recovery method of Claim 9, wherein the default phase value is $\pi/4$.

Claim 11 (original): The symbol timing recovery method of Claim 9, wherein the symbol has 25 sampling points, which means that a sampling rate is 25 times of a symbol rate.